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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,669	11/20/2003	Eric Plaks	10559-873001/INTEL P17392	1320
20985	7590	02/05/2008	EXAMINER HOANG, HIEU T	
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ART UNIT 2152	PAPER NUMBER
			MAIL DATE 02/05/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,669	PLAKS ET AL.	
	Examiner	Art Unit	
	Hieu T. Hoang	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9,13-21 and 28-36 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9,13-21 and 28-36 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 November 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>See Continuation Sheet</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :06/15/05,
04/20/05, 03/07/05, 03/15/04.

DETAILED ACTION

1. This office action is in response to the communication filed on 11/20/2003.

Election/Restrictions

2. This application contains claims directed to the following patentably distinct species:

Invention I: claims 1-9, 13-21 and 28-36, directed to a method and corresponding computer program, system and processor for installing a timer by writing a status bit into a first table indexed by a first pointer and writing a value corresponding to the timer information into a second table indexed by the first pointer.

Invention II: claims 10-12, 22-27, directed to a method and corresponding computer program and system for installing N timers during a first time interval and expiring a first one of the timers during a second or a third interval, the tree intervals being distinct, depending on N.

The species are independent or distinct because Invention I (claims 1-9, 13-21, 28-36) deals with installing a timer in a memory system comprising two tables indexed by the same pointer, while Invention II (claims 10-12, 22-27) deals with installing a plurality of timers in a first interval and expiring one of the plurality of timers in a second or third interval, the three intervals being disjointed, depending on the number of timers installed.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.
MPEP § 809.02(a).

3. During a telephone conversation with Elliott Mason on 01-04-2008 a provisional election was made without traverse to prosecute the invention of group I, including claims 1-9, 13-21 and 28-36. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-12 and 22-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Claims 1-9, 13-21 and 28-36 are presented for examination.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 13-16 are rejected under 35 U.S.C. 101 the claimed invention is directed to non-statutory subject matter. A computer program product, as disclosed in the specification as a computer program embodied in an information carrier, e.g., a propagated signal, is non-statutory subject matter (specification, page 13, second par.). Correction is required.

Claim Objections

7. Claims 1-9, 17-21, 28-36 are objected to because of the following informalities: the claim preambles are indecisive. A more specific preamble is required for each claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 31-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite TCP and PHY devices. First of all,

acronyms have to be clearly spelled out in the claims. Second, it is vague what is meant by a PHY device. Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-9, 13-17, 19-21 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Basso et al. (US 5,491,815, hereafter Basso).

12. For claim 1, Basso discloses a method comprising:

installing a timer by writing a status bit into a first table indexed by a first pointer (fig. 3, each bit in a main table has a pointer to associated timers), and writing a value corresponding to timer information into a second table indexed by the first pointer (fig. 3, values of a timer such as Tf, Tv, Ts).

13. For claims 13, 17 and 28, the claims are rejected for the same rationale as in claim 1.

14. For claim 2, Basso further discloses the value comprises a memory address of a connection descriptor structure (col. 1 lines 65-66, col. 2 lines 47-59, memory address of a connection).
15. For claim 3, Basso further discloses the first table stores a plurality of status bits including the status bit and the second table stores a plurality of values corresponding to a like plurality of timers (fig. 3, plurality of bits in the main table, second table 210 stores a plurality of timer values).
16. For claim 4, Basso further discloses canceling the timer by changing the status bit (col. 4 lines 46-47, a flag state is a bit indicating whether a timer is active or not).
17. For claim 5, Basso further discloses sending the value to a process to expire the timer (col. 8 lines 45-65, sending out a notification if the remaining time is zero or timer has expired).
18. For claim 6, Basso further discloses expiring the timer comprises: reading the value; determining whether the status bit has been changed; and sending a message including the value to expire the timer if the status has not been changed (col. 8 lines 45-65, sending out a notification if the timer is still active and remaining time is zero or timer has expired).

19. For claim 7, Basso further discloses incrementing the first pointer and a second pointer based on a clock (col. 4 lines 19-22, current index is pointed to using a clock, abstract, install index or insert index=current index +Tv).
20. For claim 8, Basso further discloses expiring the timer further comprises: incrementing the second pointer; and incrementing the first pointer if a difference between the first pointer and the second pointer is smaller than a pre-determined offset (fig. 7B, timer = next).
21. For claim 9, Basso further discloses reading the value includes reading other values in the second table adjacent to the value (fig. 3, read Tf, Tv, Ts of a TCB).
22. For claims 14, 19, 29, the claims are rejected for the same rationale as in claim 3.
23. For claims 15, 20, 30, the claims are rejected for the same rationale as in claim 4.
24. For claims 16, 21, the claims are rejected for the same rationale as in claim 5.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso, in view of Sharp (US 2005/0182841).

27. For claim 31, Basso discloses a system comprising:

Instructions to install a timer by writing a status bit into a first table in a memory, the first table indexed by a first pointer (fig. 3, each bit in a main table has a pointer to associated timers), and write a value corresponding to timer information into a second table in memory, the second table indexed by the first pointer (fig. 3, values of a timer such as Tf, Tv, Ts).

Basso does not disclose a network host having a network processor; a TCP offload engine in communication with the network processor; and a wireless PHY device in communication with the network processor; wherein the TCP offload engine is configured to run the above instructions.

However, Sharp discloses the same (fig. 1, a network interface card containing a TCP offload engine connecting to a PHY interface to a wireless network)

It would have been obvious for one skilled in the art combine the teachings of Basso and Sharp to apply Basso's timer management scheme to Sharp's offload engine to further enhance the functionality of the network device containing the offload engine.

28. Claims 32 and 33, as applied to claim 31, are rejected for the same rationale as in claims 3 and 4.

29. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso, in view of Nguyen (US 5,442,627).

30. For claim 34, Basso discloses a method comprising:

installing a timer by writing a status bit into a first table in a memory, the first table indexed by a first pointer (fig. 3, each bit in a main table has a pointer to associated timers), and

writing a value corresponding to timer information into a second table in memory, the second table indexed by the first pointer (fig. 3, values of a timer such as Tf, Tv, Ts); and

Basso does not explicitly disclose:

receiving a first data packet from a source;

sending a second data packet to the source for acknowledging receipt of the first data packet, after the timer has expired.

However, Nguyen discloses a delayed ACK timer in a TCP protocol wherein upon expiration of the timer, a message is returned to the source acknowledging the receipt of the first data packet (fig. 5, sending an ACK upon the expiration of the delay ACK timer).

It would have been obvious for one skilled in the art to acknowledge a reception of data packet(s) using a delayed ACK timer as disclosed by Nguyen in the timer management scheme of Basso to reduce networking overhead (Nguyen, abstract).

31. Claims 35 and 36, as applied to claim 34, are rejected for the same rationale as in claims 3 and 4.

32. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Basso, as applied to claim 17, in view of what was known in the art.

33. For claim 18, the claim is rejected as in claim 17. Basso does not disclose the processor comprises a microengine array.

Official Notice is taken that a microengine array processor was well-known in the art at the time the invention was made (see Vipat et al. Intel Technical Journal, fig. 2).

It would have been obvious for one skilled in the art combine the teachings of Basso and what has been known in the art use a microengine array processor as the offload engine to further enhance the processing power and functionality of the network device containing the offload engine.

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Kaniyar et al. US 2003/0084175.
- Wang et al. US 5,926,481.
- Barbas et al. US 6,233,240.
- Glass. US 5,363,449.
- Keen. US 5,664,091.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

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